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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,013	07/15/2003	Phillip J. Hawkins	NSD 2002-003	8606
7590	09/22/2005		EXAMINER	
James C. Valentine Westinghouse Electric Company LLC 4350 Northern Pike Monroeville, PA 15146			GREENHUT, CHARLES N	
			ART UNIT	PAPER NUMBER
			3652	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/620,013

Applicant(s)

HAWKINS ET AL.

Examiner

Charles N. Greenhut

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/23/04 & 7/15/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

**I. Drawings**

1. The lower "H1" in figure 4 should be labeled "H2". Please explain or correct.
2. The orientation of the rail (7), linear slide blocks (13), and cylinder block (4) in figure 5 does not agree with the orientation of those parts in figure 2, i.e., in figure 5 the slide block (13) is positioned between the rail (7) and cylinder block (4), however in figure 2 it appears the rail (7) is in between the slide blocks (13) and cylinder block (4). Please explain or correct.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: (10) on page 9.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

**II. Claim Rejections - 35 USC § 112**

The following is a quotation from the relevant paragraphs of 35 U.S.C. 112:

(2) The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 3-5, 7, 11, 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1.1. With respect to claim 3 and 8, it is unclear what the word "respectively" in line 2 is in reference to.

1.2. Claim 4 recites the limitation, "the member associated with the at least one of the grippers" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

1.3. With respect to claim 5, the term "a stop functions in with the at least one of the grippers" in lines 1-2 is unclear.

1.4. With respect to claim 7, the term "fingers that are respectively insertable into a corresponding one of said tubes extending through the tube sheet including a limit switch" is ambiguous because it could be interpreted to include the limit switch in the fingers or the tube sheet. In the case of the latter, there is insufficient antecedent basis for this limitation in the claim.

1.5. Claim 5 recites the limitation, "said member" in line 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

1.6. Claim 11 recites the limitation, "the more than one independently operated manipulator" in lines 1-2. There is insufficient antecedent basis for this limitation in

the claim. While claim 10 recites the limitation, "the manipulator is sized to permit more than one independently operated manipulator" applicant never makes a positive recitation that the more than one independently operated manipulator element.

1.7. Furthermore, with respect to claim 11, applicant is improperly claiming both a method and an apparatus in a single claim since by including the procedural step of operating more than one manipulator at the same time in an apparatus claim.

1.8. With respect to claim 13, "a payload of seventy pounds or less" includes the manipulator supporting no payload at all, in which case claim 13 is of improper dependent form for failing to further limit the subject matter of a previous claim.

1.9. With respect to claim 14, the term "and/or" in line 1 is ambiguous.

### **III. Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim(s) 1-7 and 14 is/are rejected under 35 U.S.C. 102(b) as being anticipated by GUGEL (US 4,438,805).

1.1. With respect to claim 1, GUGEL discloses a base member (8a/8b), a holder (6), the base member having a gripper (8), a block member (11) for linear and rotary movement, and a foot member having a gripper (8c/8d).

1.2. With respect to claim 2, GUGEL additionally discloses two directions of linear travel (Fig. 2 shows X & Y).

- 1.3. With respect to claim 3, GUGEL additionally discloses horizontal and vertical directions ((8a/8b) can be moved in Z while block (11) remains stationary in Z).
- 1.4. With respect to claim 4, GUGEL additionally discloses the gripper exerting a force in a direction.
- 1.5. With respect to claim 5, GUGEL additionally discloses a stop.
- 1.6. With respect to claim 6, GUGEL additionally discloses the foot having two spaced grippers.
- 1.7. With respect to claim 7, GUGEL additionally discloses the grippers having insertion fingers and a limit switch (Col. 5).
- 1.8. With respect to claim 14, GUGEL additionally discloses a pneumatic drive and a motorized drive.

#### **IV. Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim(s) 8-9 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over GUGEL in view of GEBELIN (US 4,004,698).

- 1.1. With respect to claim 8, GUGEL additionally teaches the grippers having insertion fingers biased against an interior of the tube. GUGEL defers to German application publication DE-2552341-A (corresponding to US patent 4,004,698 to GEBELIN) for a detailed description of the grippers. GEBELIN teaches an internal piston that forces

bearings to move up a tapered raceway to force the fingers out against the interior of the tube. It would have been obvious to one of ordinary skill in the art to modify GUGEL with the piston of GEBELIN since the combination is explicitly taught in GUGEL.

1.2. With respect to claim 9, GUGEL defers to German application publication DE-2552341-A (corresponding to US patent 4,004,698 to GEBELIN) for a detailed description of the grippers. GEBELIN teaches the fingers having a spring bias. It would have been obvious to one of ordinary skill in the art to modify GUGEL with the spring biased fingers of GEBELIN since the combination is explicitly taught in GUGEL.

2. Claim(s) 10-11 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over GUGEL in view of GERKEY (US 4,261,094).

2.1. With respect to claim 10, GUGEL fails to teach the manipulator sized to permit more than one. GERKEY teaches the manipulator sized to permit more than one. It would have been obvious to one of ordinary skill in the art to modify GUGEL with the sizing of the manipulator of GERKEY in order to allow for multiple manipulators to function simultaneously, thereby decreasing maintenance time.

2.2. With respect to claim 11, GUGEL fails to teach manipulators independently operated at the same time. GERKEY teaches manipulators independently operated at the same time. It would have been obvious to one of ordinary skill in the art to modify GUGEL with the manipulators independently operated at the same time of GERKEY in order

for multiple manipulators to function simultaneously, thereby decreasing maintenance time for the plurality of tubes.

3. Claim(s) 12-13 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over GUGEL in view of WARD (US 3,913,452).

3.1. With respect to claim 12, GUGEL fails to teach the manipulator is approximately 30 pounds or less. WARD teaches manipulator is approximately 30 pounds or less (Col. 9). It would have been obvious to one of ordinary skill in the art to modify GUGEL with the light weight of WARD in order to minimize the gripping force required to suspend the manipulator from the tubes.

3.2. With respect to claim 13, GUGEL additionally teaches a payload of seventy pounds or less.

## **V. Conclusion**

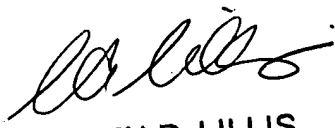
1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Greenhut whose telephone number is (571) 272-1517. The examiner can normally be reached on 7:30am - 4:00pm EST.
3. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.
4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published



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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CG



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